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ABSTRACT

In a relatively small, predominantly undergraduate university, it is often hard to find the time and resources to conduct educational research. One small liberal arts college, the University of Montevallo (Alabama), has addressed this problem by involving undergraduate psychology majors in collaboration in educational research with faculty. It is necessary to build into the students a realization of the necessity of involving themselves in research projects, particularly if the students are bound for graduate school. Because students usually have limited experience, it is essential that research ideas produce data that can be rather easily analyzed and portrayed. The personal computer and word processor can be used in the analysis of qualitative and quantitative data. The undergraduate student involved in research must learn to write the research in an appropriate style with appropriate referencing. Faculty members model research and writing techniques for students to copy. Because the psychology faculty of the University of Montevallo focuses on preparing students for graduate school and the professional world, they consider the time and energy spent on encouraging student participation as time well spent. The experience may be enriching for the faculty member as well as the students. (Contains 26 references.) (SLD)

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INVOLVING UNDERGRADUATE STUDENTS IN EDUCATIONAL RESEARCH ACHIEVING TWO GOALS AT ONCE

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University of Montevallo

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INVOLVING UNDERGRADUATE STUDENTS IN EDUCATIONAL RESEARCH ACHIEVING TWO GOALS AT ONCE

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In a relatively small, predominately undergraduate university it is often hard to find the time and resources to conduct educational research. Among other restraints, there are no graduate students available in this setting to collaborate with or to assist in research. There are increasing opportunities and pressures for students in some disciplines to be involved in research before completing their undergraduate work. This paper will describe how one small liberal arts university has successfully addressed these concerns by involving undergraduate psychology majors in educational research in collaboration with faculty. This helps the faculty in conducting research and helps the students in learning research methodology and skills of writing and presenting research, as well as providing students opportunities for professionally disseminated research while they are still undergraduates.

In the past few years, there has been a proliferation of opportunities for undergraduate students to present faculty-sponsored research projects at undergraduate conferences and at regional professional meetings (Carsud & Palladino, 1985; Matthews, 1982; Tryon, 1985). This increase is directly tied to graduate schools' stated preferences for incoming masters and doctoral students to have a proven track record in the process of designing, implementing, writing, and presenting various kinds of research projects (APA, 1991). In these times of fiscal shortfalls, it is difficult for faculty members to find the time and resources to develop an ongoing and workable research program for their students. However, it is not impossible. Dedication is required on the part of the faculty and students, and a good measure of practicality in designing and carrying out the research projects.

In this paper we will share some of the strategies that have been developed and implemented with success during the past seven years by the Psychology faculty at The University of Montevallo. For the past four years, UM's psychology students have presented a large number of papers (eight separate papers this past year) at undergraduate psychology research conferences, most dealing with educational and developmental research. For a number of these research projects, the students have further developed these papers and presented them at the annual meetings of the Mid-South Educational Research Association or the Southeastern Psychological Association. With a full-time faculty of 3 1/2 persons, how have we accomplished this? This paper will attempt to explain and outline our strategies so that other schools and departments in other areas may increase their students' participation in research activities.

It is often the case at small, liberal arts colleges and universities, that faculty members are given neither released time nor extra funding to carry on research activities. However, an inventive faculty may be able to carry a full teaching load and work independently with students in research if several conditions are met. First, it is necessary to build into the students a realization of the necessity of involving themselves in research projects, particularly if they are graduate school bound. Once that is accomplished, there must be a procedure put

into place to match highly motivated students with faculty members who will work with them. In a small program/department, direct face-to-face requests by the students to the faculty member with whom they wish to work may be sufficient. However, a written request by the student on a program-developed form may aid the faculty member in assessing whether or not the student has had enough courses relevant to research (i. e., statistics, research design, computer, etc.). Finally, there must be good communication among faculty members willing to work with students in research so that if a qualified student cannot be fit into one faculty member's research program, then another faculty member may be able to work with the student.

Actually, it is often valuable to have faculty collaborate on student research projects. Collaboration may allow two or more faculty members to pool their time and resources and to work with a group of undergraduate students on one or more research projects at a time. At the University of Montevallo interested faculty members have routinely met at least yearly to brainstorm ideas that we can collaborate on with the students. The goal is always to come up with ideas that are relevant to the filed in which we are specialists, ideas that are intrinsically interesting to both the faculty and the students, and ideas that are manageable in depth and breadth during one or two academic years of work. A research area of great interest to undergraduate students is educational research. They are very close to education and its problems (particularly higher education), and it has proved to be relatively easy to develop topics and carry out educational research with the supervision of a faculty member. This benefits not only the student as a learning experience, but the educational research enterprise as well, both by contributions to the literature and by addressing applied problems.

A concern in our program, which is probably shared by other programs and schools, is that our students have limited sophistication with computers--in both the areas of data analysis and word processing. Added to this is the problem of limited computer facilities available to students for research. Therefore, it is essential that the research ideas produce data that can be rather easily analyzed and portrayed in tabular form. To this end, we have chosen to involve many of our students in qualitative research on topics of interest to the students. The areas of research include the following: identification of how learning disabled college students perceive the "LD" label (Barisa & Rogers, 1990); identification of stressors and coping skills of incoming freshmen (Cobern, Gilbert, & Staik, 1990); identification of in-class and out-of-class cheating behaviors by students (Graves, Westcott, McKemy, Staik, & Rogers, 1991); the development of a scale to assess what students want done with their bodies after death (Arrington & Staik, 1986); an assessment of gender stereotyping of adult occupations by nursery-school children (Westcott & Staik, 1991); an assessment of stereotypical labels used by college students for people in the different decades of life (Gilbert, Cobern & Staik, 1989; Cobern, Gilbert, & Staik, 1989); an assessment of what college students read for pleasure (Staik, Staik, Cobern, & Gilbert, 1990); an assessment of how being a psychology major changes a student's values (Owens, Brasher, Staik, & Rogers, 1993); and the reasons for attrition/transfer of black students (Law & Rogers, 1991).

In addition, quantitative research studies involving students' use and analysis of Eison's (Eison, 1982) Learning Orientation/Grade Orientation Scale (Rogers, Bolen, & Palmer, 1988; Rogers, Palmer, & Bolen, 1988); Stark's Student Goals Exploration instrument (Stark, Lowther, & Ryan, 1989; Stark, Lowther, Shaw, & Slossen, 1990; Atchison, Eppers, & Rogers, 1991); and a Pleasure Reading Questionnaire developed by Staik and Rogers (Blackwood, Flowers, Rogers, & Staik, 1991; Staik et al., 1990), have been found to be both interesting and manageable by undergraduate students. The personal computer and a word processor can be used easily in both the analysis of qualitative data from interviews or questionnaires (Rogers & Bolland, 1990) and in the analysis of quantitative data gathered from standardized instruments or home-made scales.

Scales dealing with such topics as the attitudes of college students toward the gender specificity of college majors (Brasher, Westcott, & Staik, 1992) and the physical (Lyons, Whitlock, & Staik, 1992) and cognitive changes (Smith, Walton, Staik, & Rogers, 1993) associated with aging have been easily constructed and used to gather data for analysis. The construction of these Likert-format scales is a valuable lesson in research for the undergraduate student. The content area must be adequately researched and sampled, the scale items carefully worded to guard against bias and confusion, and professional judges consulted before the scale may be used to collect data. The undergraduate student emerges from this exercise with a fresh understanding of the complexity of these seemingly simple scales. Moreover, the student has more of a feeling of ownership in a scale that she/he has constructed. The time spent in this type of research is more than that spent in using an already-developed scale, but is worth looking into for the student who is serious about attending graduate school.

It is imperative that the undergraduate student who is involved in research understand the necessity of learning to write the research in an appropriate professional style with appropriate referencing of relevant research. In having the student use the APA Publication Manual (1988) as the guide to follow in writing the research for presentation, we feel that we are giving the student an edge in the pre-professional world of graduate school. Our research students not only have done research and analyzed the data (however simple), they have also written their paper in APA style and have presented the paper before their peers and other professionals in undergraduate research conferences and regional professional meetings before they enter graduate school. In fact, because of the collaboration of both faculty and students on different projects, it is not uncommon for a student to have been involved heavily in the research, writing, and presentation of three to six research projects by the time of graduation. Peer review of papers is routinely carried out with a professor's input, and rewriting of each section several times is standard procedure. Indeed, it is the same procedure that most of us as faculty members use in the preparation of our own research. We model these techniques for our students to emulate.

Which brings up an interesting point--how can we teach a full load, take care of other routine collegiate duties (committees, etc.), have thirty or more advisees, spend the four to six hours per week that are required to supervise undergraduate research projects, and produce

our own research? With difficulty, certainly. However, in colleges and universities that are primarily teaching institutions rather than research institutions, the emphasis should rightly be on teaching our students to carry out good, professionally done research. There is still the time in the summer for faculty to work on our own projects, and, perhaps, to find ways to involve students in our own research.

A word of caution here--the undergraduate student who gets the maximum amount from being involved in research needs to be more than just the "gopher" for faculty research projects. Personal involvement with the topic to be studied, a review of relevant literature, scale selection or construction, data collection and analysis, the writing of the paper, and, finally, the rehearsal and presentation of the research results and implications create excitement in the undergraduate student and pride in a job well done.

Not only does this create excitement for the undergraduate student, but it also provides important information for the institution for use in program evaluation, program planning, and increased understanding of issues pertinent to higher education. For example, the study on minority attrition (Law & Rogers, 1991) is to date the only study that has been done at our institution on this topic, and thus has provided invaluable information for the university. The study on stress (Cobern et al., 1990) was shared with the student affairs staff, who used the information gained in program planning . Studies done on cheating behaviors of college students (e. g., Graves et al., 1991) have provided for an interesting and informative dialog among administrators, faculty, and students. Results of the study on learning disabled students' reactions to labeling (Barisa & Rogers, 1990) were shared with student support services staff, who have used them to sensitize faculty and administration on this issue. Particularly now, in light of the Americans with Disabilities Act, the importance of this research has become even more salient. The research on changing values in psychology majors (Owens et al., 1993) is being used as part of a longitudinal evaluation of the Psychology program.

The Psychology faculty at the University of Montevallo see one of their important functions as the preparation of our undergraduate students for entry into graduate school and the professional world. Within the past seven years of building an undergraduate research program, we have had at least five of our graduating seniors accepted directly into doctoral programs and at least ten other students accepted into masters programs. In all of these cases, we have received feedback from either the graduate school or the student that the student's undergraduate research experience and paper presentation at an undergraduate research and/or a regional professional conference was a definite asset to the student's application to graduate school.

It is the hope of the authors of this paper that other faculty who are not yet involved with their undergraduate students in the process of producing and presenting undergraduate research papers will see the benefits from such activity and will elect to try to make time in their busy schedules for what may well become a very enriching learning experience for the faculty member as well as for the students.

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